

NEXT-RNAi

Summary

NEXT-RNAi is a software for the design and evaluation of genome-wide RNAi libraries and performs all steps from the prediction of specific and efficient RNAi target sites to the visualization of designed reagents in their genomic context. The software enables the design and evaluation of siRNAs and long dsRNAs and was implemented in an organism-independent manner allowing designs for all sequenced and annotated genomes. It requires the minimal input of desired target sequences and an off-target database.

NEXT-RNAi implements several methods to predict a reagents' quality and offers many special features such as the straight-forward design of independent RNAi reagents. How these quality parameters are assessed and an overview about NEXT-RNAi features is available [here](#).

Getting Started with NEXT-RNAi

- [Installing NEXT-RNAi Example analysis run](#)
- [Running NEXT-RNAi](#)
- [NEXT-RNAi Input and Output Files](#)

NEXT-RNAi Results

- Design of genome-wide libraries of long dsRNA
 - [Drosophila melanogaster](#)
 - [Tribolium castaneum](#)
 - [Anopheles gambiae](#)
 - [Homo sapiens esiRNAs](#)
- Design of siRNA libraries
 - [Homo sapiens siRNAs](#)
- Evaluation of public RNAi libraries
 - [Evaluation of public Drosophila RNAi libraries](#)
 - [Evaluation of public human siRNA libraries](#)
- Validation of NEXT-RNAi
 - [Validation of efficiency methods implemented](#)
 - [Drosophila phosphatase set used for knock-down validation](#)

Using NEXT-RNAi with Galaxy

NEXT-RNAi can be incorporated into [Galaxy](#) to create re-usable workflows and use Galaxy as web-front end. Here is a [how-to guide](#).

Software Download

- [Download](#) NEXT-RNAi perl source code
- NEXT-RNAi [README](#)
- NEXT-RNAi [LICENSE](#)

Links and related Websites

- [E-RNAi](#) webservice for gene-by-gene RNAi designs
- [GenomeRNAi](#) database for RNAi phenotypes from Drosophila and human RNAi screening experiments

Contact

Please contact us for questions or suggestions:

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Reference

Thomas Horn, Thomas Sandmann and Michael Boutros. *Design and evaluation of genome-wide libraries for RNAi screens*. Genome Biol. 2010 Jun 15;11(6):R61. [[Link to manuscript](#)]